

REMARKS

The Office Action mailed June 10, 2010 has been reviewed and reconsideration of the above-identified application in view of the following amendments and remarks is respectfully requested

Claims 1-11 are pending.

Claims 1-11 stand rejected.

Claims 1, 9, 10 and 11 are independent claims.

Claims 1, 9, 10 and 11 have been amended.

Claims 1-11 stand rejected under 35 USC 103(a) as being unpatentable over Cok (USPPA 2006/0077135). In maintaining the rejection of the claims, the Office Action refers to Fig. 4 and para. 0046-0047 for support.

Applicant respectfully disagrees with and explicitly traverses the rejection of the claims.

Cok discloses a system for compensating an OLED device having an output that changes with time or use, wherein the OLED device is driven at a known drive signal and a corresponding first current and light output are measured. After a time period the OLED device is driven again at the known signal and a corresponding second current and light output are measured. An aging function based on the first and second currents, the known signal and first and second light outputs is determined. Cok further discloses calculating a correction factor to correct for changes in light output of the OLED using the aging function and applying the correction factor to a drive signal. (see ABSTRACT).

Hence, the system of Cok determines correction factors based on measured currents, applied voltage and output brightness.

However, Cok fails to provide any teaching regarding the claim element of "storing the X value for each drive transistor." In supporting the rejection of this claim element, the Office Action refers to para. 0037 and states "note the electrical characteristic parameters are known to tfts, it would be obvious to store these values to use in calculations for correcting video signals"

However, as noted above, Cok determines an age function and correction factor based on current, voltage and brightness level. Cok provides no teaching regarding storing a characteristic of the tfts that may be used to determine a correction factor.

In fact, Cok teaches away from requiring knowledge of the individual elements in the display. See, for example, para. 0037 which states, "... Current is typically supplied to all of the light emitting elements ... through a common power signal ...; the current passing from the power circuit to a ground may be measured to provide an instantaneous measure of the current passing through **all of the light emitting elements ... at once. Hence, no measurement of the individual current or voltage drop across any single light emitting element is necessary.**" (emphasis added).

Thus, as Cok explicitly teaches performing a macro current measurement (of all the light emitting elements) and not a micro current measurement with regard to any single light emitting element, there is no need to store characteristic of the tfts, as asserted by the Office Action.

In addition, the Office Action refers to para. 0037 for supporting the rejection of the claim element "determining from the stored X values and the received v_d values an expected current through the power line i_p using a model which relates the power line current to the v_d and X values of the drive transistor."

However, Cok teaches a model that may be used to determine a relationship between an input voltage and a brightness level (see para. 0038, page 4, "[t]hese two measurements of current and light output together with the known given voltage provide data used to predict the further degradation of the device luminance as it is used with respect to resistance changes. In particular, through performance measurements of existing OLED devices during the device's lifetime, **applicants have empirically determined a relationship between the ratio of the current and the light output** from the OLED that can be used to calculate the additional current necessary to correct the light output from the OLED device.")

Thus, Cok teaches a model (i.e. a ratio between current and light output to determine a needed current and fails to teach or suggest the use of stored X values that represent characteristics of the tfts in determining an expected current.

In addition, assuming that the video data signals of the present invention are comparable to the known voltages of Cok that are used for calibration (which applicant believes is not correct), Cok fails to disclose the claim element of "correcting subsequent video data signals in accordance with the stored X values." Rather, Cok discloses that known voltages are applied to the compensation circuit to determine correction factors. The correction factors are then applied to image data signals (Fig. 4, item 18, para. 0046) to adjust the image data signals in accordance with the correction factors.

Cok fails to disclose that the correction factors are applied to the known signals. Rather with reference to Figure 4, the correction factors are applied to data signals 18 (image signals) and not to the known signal used for the calibration process. Thus, Cok fails to disclose that the claim element "correcting subsequent video data signals in accordance with the stored X values."

For the remarks made herein, applicant submits that Cok fails to disclose at least one material element recited in each of the independent claims.

A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest all the claim limitations. The Court in *KSR v. Teleflex* (citation omitted) has held that the teaching, suggestion and motivation test (TSM) is merely to be used as a helpful hint in determining obviousness and a bright light application of such a test is adverse to those factors for determining obviousness enumerated in *Graham v. John Deere* (i.e., the scope and content of the prior art, the level of ordinary skill in the art, the

differences between the claimed invention and the prior art and objective indicia of non-obviousness) (citation omitted).

Cok fails to provide any teaching regarding using a model which relates the power line current to the video data signal voltage and a stored X value for each drive transistor to determine an expected current, or to determine a correction factor based on a difference between the measured and expected current values or to correct subsequent video data signals in accordance with the stored X values, as is recited in the claims.

Notwithstanding the arguments presented herein, applicant has elected to amend the independent claims to more clearly recited the subject matter claimed as the invention. That is, the independent claims have been amended to explicitly refer to the "video data signals corresponding to an image to be displayed." No new matter has been added. Support for the amendment may be found at least on page 15, lines 16-19 (" The process is repeated, referenced at 450, until the vector is full. This can be carried out during normal operation of the display device when the pixels of the array are being addressed **with sets of video data voltages corresponding to an image to be displayed.**").

As remarked above, Cok discloses using a known signal to determine correction factors. These signals do not correspond to signals used to display an image. (see, para. 0046, "... The controller 14 corrects the input image signal for each group of light emitting elements using a computational or lookup table circuit 16 to form a corrected input image signal 20 ... Periodically, a new correction factor for the OLED device is calculated. **The OLED device is removed from use, the known signal is reapplied to each group of light emitting elements and a measurement of the OLED device current [is] taken again.**")

Applicant submits that for the amendments made to the claims and for the remarks made, herein, the independent claims include subject matter that is not

taught by the cited reference and, hence, are not rendered unpatentable over the cited references.

With regard to the remaining claims, each of these claims depends from a corresponding one of the independent claims and, hence, each of the remaining claims is also patentable over the cited reference by virtue of their dependency upon an allowable base claim.

For the amendments made to the claims and for the remarks made herein, applicant submits that the reason for the rejection has been overcome and respectfully requests that the rejection be withdrawn.

Applicant respectfully requests that a Notice of Allowance be issued.

Applicant denies any statement, position or averment stated in the Office Action that is not specifically addressed by the foregoing. Any rejection and/or points of argument not addressed are moot in view of the presented arguments and no arguments are waived and none of the statements and/or assertions made in the Office Action is conceded.

Applicant makes no statement regarding the patentability of the subject matter recited in the claims prior to this Amendment and has amended the claims solely to facilitate expeditious prosecution of this patent application. Applicant respectfully reserves the right to pursue claims, including the subject matter encompassed by the originally filed claims, as presented prior to this Amendment, and any additional claims in one or more continuing applications during the pendency of the instant application.

In the event the Examiner deems personal contact desirable in the disposition of this case, the Examiner is invited to call the undersigned attorney at the telephone given below.

No fees are believed necessary for the timely filing of this paper.

Respectfully submitted,
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Date: July 25, 2010

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